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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,655	03/28/2006	Hirofumi Tongu	287795US3PCT	5672
22850	7590	10/09/2007	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				NGUYEN, TU MINH
ART UNIT		PAPER NUMBER		
3748				
NOTIFICATION DATE		DELIVERY MODE		
10/09/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/573,655	TONGU ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Tu M. Nguyen	3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 March 2006 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060328</u> .  | 6) <input type="checkbox"/> Other: _____.                         |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Publication 11-350952 (JP 11-350952) in view of Japan Publication 6-73328 (JP 06-073328).**

Re claim 1, as shown in Figure 1, JP 11-350952 discloses a support structure for a muffler (1) with a particulate filter (40, 50) stored inside, the muffler being divided, at positions in front of and behind the stored filter, into portions (10, 20), the divided portions being fastened together through flanges (11, 21) thereof for easy detachment and attachment.

The muffler in JP 11-350952 is obviously used with a vehicle to reduce noise and harmful particulate matter in an exhaust gas stream. The inventors, however, fail to disclose that the support structure further comprises brackets for suspension and support of the muffler from and by a vehicle body, the brackets fitted by fastening said brackets together upon fastening of the flanges.

As shown in Figures 1 and 3, JP 06-073328 discloses a structure of a muffler and its attachment support to a vehicle body. JP 06-073328 teaches that it is conventional in the art to

utilize brackets (23, 29) for suspension and support of the muffler from and by the vehicle body, the brackets fitted by fastening the brackets together upon fastening of the flanges (12a, 13a). It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the teaching by JP 06-073328 in the structure of JP 11-350952, since the use thereof would have been routinely practiced by those with ordinary skill in the art to securely connect the muffler to a vehicle body.

Re claim 2, in the modified structure of JP 11-350952, as taught by JP 06-073328, each of the brackets (23) has a lower end formed with an overlap portion for overlapping with corresponding ones of the flanges (12a) only at portions thereof adjacent to their tops, the bracket being fitted by fastening the overlap portion together with the flanges at a position adjacent to the tops of the flanges.

**3. Claims 3, 5 and 4, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-350952 in view of JP 06-073328 as applied to claims 1 and 2, respectively, above, and further in view of Hirota et al. (U.S. Patent 6,588,203).**

Re claims 3-4, the modified support structure of JP 11-350952 discloses the invention as cited above, however, fails to disclose that the particulate filter carries oxidation catalyst.

As shown in Figure 1, Hirota et al. disclose an exhaust device of internal combustion engine, comprising a muffler (23). As depicted in Figures 3A and 6 and indicated on line 23 of column 7 to line 34 of column 8, Hirota et al. teach that it is conventional in the art to include a particulate filter (66) in a passage of the muffler, wherein the filter is made to have multiple paths (80, 81) with partition walls (84) in between and a catalyst layer having an oxidation catalyst (Pt) on the walls in order to purify harmful emissions in an exhaust gas stream. It would

have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the catalyst layer taught by Hirota et al. in the modified structure of JP 11-350952, since the use thereof would have been routinely practiced by those with ordinary skill in the art to remove or purify harmful emissions in an exhaust gas stream before releasing the purified gas stream into the atmosphere.

Re claims 5-6, in the modified support structure of JP 11-350952, as taught by Hirota et al., the particulate filter carries NOx absorption reduction catalyst (at least one of alkali or alkaline earth metals).

*Prior Art*

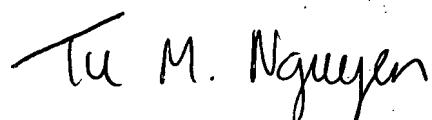
4. The IDS (PTO-1449) filed on March 28, 2006 has been considered. An initialized copy is attached hereto.
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of six patents: Giarrizzo (U.S. Patent 3,675,398), Wagner et al. (U.S. Patent 5,880,413), Roe et al. (U.S. Patent 6,481,673), Yamamoto et al. (U.S. Patent 6,941,751), Stodolka (U.S. Patent 6,981,567), and Chae (U.S. Patent 7,165,645) further disclose a state of the art.

***Communication***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMN

Tu M. Nguyen

October 1, 2007

Primary Examiner

Art Unit 3748